



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/511,162

10/14/2004

Helmut Winterling

53429

9022

26474

7590

02/16/2007

NOVAK DRUCE DELUCA & QUIGG, LLP

1300 EYE STREET NW

SUITE 1000 WEST TOWER

WASHINGTON, DC 20005

EXAMINER

ZEMEL, IRINA SOPJIA

ART UNIT

PAPER NUMBER

1711

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

02/16/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/511,162

Applicant(s)

WINTERLING ET AL.

Examiner

Irina S. Zemel

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohrschladt et al USP 6,316,588 or Mohrschladt et al (USP 6,288,207).

The rejection stands as per reasons of record.

### ***Response to Arguments***

Applicant's arguments filed 11-30-2006 have been fully considered but they are not persuasive. The applicants argue that there is no suggestion or motivation to modify the disclosure of the two cited references to utilize a titanium dioxide catalyst with a BET surface area in the range from 5 to 35 m<sup>2</sup>/g, because the references teach away from such a modification. The applicants classify expressed teaching of the reference, namely "The BET surface area in preferably more than 40 m<sup>2</sup>/g,.... If the BET surface area is smaller, than the volume of the catalyst bed should be increased to ensure adequate catalytic activity" as teaching away from reducing the BET surface area of catalyst from expressly disclosed 40 m<sup>2</sup>/g to the claimed 35 g/m<sup>2</sup>. The examiner strongly disagree. This portion of the disclosure is not teaching away, rather it is an expressed teaching of non-preferred, but still operable embodiment of the reference.

Art Unit: 1711

While it is true, that reducing the BET surface area of the titanium dioxide catalyst would require larger bed volume as per expressed teachings of the reference, this teaching can hardly be classified as teaching to "proceed contrary to accepted wisdom in the art." The applicants further ask a question "Why would a person of ordinary skill in the art have proceeded so as to reduce the catalytic activity and necessitate an increase in the required volume of the catalyst bed?" On of the answers to this question is – because the reference expressly teaches so. As discussed above, the reference expressly discloses possibility of reduction of BET surface area of catalyst as one operative embodiment. Following the logic advance by the applicants that it would be contrary to conventional wisdom to decrease the BET surface area of catalyst, why would anyone use different size of catalyst at all? Why not go for the maximum possible BET catalyst all the time. Why the reference expressly discloses illustrative examples in which the catalysts of VERY different BET surface area are used? The answer to all of those question lies in the art of catalyst, where it is notoriously known that a great deal of properties of the final product, parameters of polymerization process, ease to handle the catalyst, design on the production units, etc., all depends on the form of the catalyst used. Contrary to the applicants statement that increase of volume of the catalyst bed is "contrary to the conventional wisdom", it is quite within the conventional wisdom and is simple a choice of an ordinary artisan depending on other factors involved, one of which, is, by the way, is separation pf catalyst from the reaction product as expressly disclosed in the reference.

Art Unit: 1711

The examiner respectfully notes two pages of case law cited by the applicants, but maintains the position that the prima facie case of obviousness has been clearly established in the above issued rejection of the pending claims. The examiner further asserts that, aside that an ordinary skill in the art would have known and motivated to used catalyst of different BET surface area for number of reasons (discussed above), neither modification nor suggestion to modify is even needed in the instant case as the expressed teaching to use lower BET catalyst is expressly taught in the reference. It has been long established by the courts that disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. *In re Susi*, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). "A known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use." *In re Gurley*, 27 F.3d 551, 554, 31 USPQ2d 1130, 1132. A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), *cert. denied*, 493 U.S. 975 (1989).

The claimed limitation of 35 m<sup>2</sup>/g, while may not be expressly disclosed in the reference would have been clearly envisaged by an ordinary artisan from expressed disclosure that "the BET surface area in preferably more than 40 m<sup>2</sup>/g,.... If the BET surface area is smaller, than the volume of the catalyst bed should be increased to ensure adequate catalytic activity." Clearly, one envisages 35 when reading disclosure of teaching "smaller" than "preferred" 40.

Art Unit: 1711

Insofar as the unexpected results, as noted in the previous office action, increased (or similar) catalytic activity of the catalyst having smaller BET surface area is, indeed, unexpected from the disclosure of the cited references. However, no evidence of such catalytic activity is present on the record. The only alleged unexpected results are lower amount of catalyst entrapped in the polymer. The results and comparative results presented in the application have been previously discussed. Contrary to the applicants assertion, it simply does not matter what the reference teach as the preferred embodiment, as the comparison has to be made between the closest prior art disclosed, which, in the instant case, is expressed disclosure of catalyst with BET of 46 m<sup>2</sup>/g as in illustrative example of catalyst 5 in column 16. The claimed maximum surface area is 35 m<sup>2</sup>/g, and not 30. In view of a very close disclosure of the reference to the claimed upper limit of the BET surface area, the comparison of 50 with 30 is not considered representative of the claimed invention or the disclosed closest prior art.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 1711

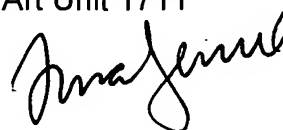
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Irina S. Zemel  
Primary Examiner  
Art Unit 1711



ISZ